

PROCEEDINGS
OF THE
SCIENTIFIC MEETINGS
OF THE
ZOOLOGICAL SOCIETY OF LONDON.

January 14, 1869.

George Busk, Esq., F.R.S., in the Chair.

Mr. Sclater exhibited a skin of a *Spizaetus*, which had been forwarded to him by Mr. Charles Rivington of Hong Kong, and which Mr. Rivington had had two years in captivity. The specimen appeared to be identical with that figured in Temminck and Schlegel's 'Fauna Japonica' as *Spizaetus orientalis*, but was considered by Mr. J. H. Gurney, to whom Mr. Sclater had shown it, to be merely one of the numerous stages of plumage of *Spizaetus nipalensis*.

An extract was read from a letter addressed to the Secretary by M. Alphonse Milne-Edwards, C.M.Z.S., relating to some interesting discoveries made by M. Grandidier, C.M.Z.S., in Madagascar:—"In digging in a little marsh in Amboulitsate (Ranou-bé) M. Grandidier had found a great number of bones belonging to a species of *Hippopotamus* much smaller than *H. amphibius*. He had found also bones of *Aepyornis* and of new species of Crocodiles and Tortoises."

Mr. Sclater exhibited specimens in spirits of a female and young Potto (*Perodicticus potto*), which Mr. Frederick M. Skues had obtained living on the west coast of Africa, and had endeavoured to bring home for the Society's Menagerie. Mr. Sclater read the fol-

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lowing extract from a letter addressed to him by Mr. Skues relating to this animal:—

“The large Potto (the mother) was offered to me for sale, at Cape Coast, by a native, about the commencement of this year; but I declined it. On the 31st March he brought it again to me, with a young one which it had given birth to on the 8th February; and I bought them, and they remained in my rooms till the end of April, when I went to Accra. All the time at Cape-Coast Castle they kept in excellent condition, but I could not succeed in taming either of them. They used to sleep all day, the mother usually perched on the top of a door, with the young one hanging in front of her belly, clasping her with both fore and hind extremities. As soon as it was dusk they came down, and wandered about the room all night. For some time the mother carried the young one about at night hanging to her belly, but afterwards it used to travel about by itself. I fed them on pine-apples and bananas, with water; milk and bread they would not eat. Though there were insects about the room, as is the case always in tropical climates, I never detected them eating them; but one day I found the large Potto busily munching at a tray of beetles I had drying, and before I detected her she had eaten a good many. At Accra I was unable to afford them the same liberty as at Cape-Coast Castle, and, moreover, being constantly ill with fever, was unable to pay them as much attention as formerly. On the 9th July the young one died, aged $21\frac{5}{7}$ weeks, with all the symptoms of intermittent fever, of which it had experienced several previous attacks. The mother I took on board the steamer on the 7th August in tolerable condition; but being an invalid I was unable to look properly after her, and she died on the 20th, a little before we reached Teneriffe. The natives call the Potto “*Aposoro*,” and seem much afraid of it.”

A note was read from Mr. Charles Fraser, M.A., F.G.S., Christchurch, Canterbury, New Zealand, dated Sept. 5, 1868, relating to a female Seal (*Stenorhynchus* —?) caught in the harbour of Lyttelton, Canterbury, New Zealand, in the month of August 1868. The worn state of the teeth indicated that it was an aged animal. Incisors $\frac{4}{4}$, canines $\frac{1-1}{1-1}$, molars $\frac{5-5}{5-5}$, in all 32. The total length was 11 feet 8 inches, and the girth at the thickest part of the body 6 feet. The nails were very small on the fore paws, and very small, but still present, on the hinder extremities. The whole body was covered with thin, sparse, longish hairs lying close to the skin. In colour the animal was grey above, with black flakes, and a brownish tinge all over the central part. On the sides the black spots were replaced by white flakes or spots; while the underpart of the body was light grey. The fore paws were white, with light grey flakes; the hinder extremities black, with light grey flakes. There was no tail, nor rudiment of one; the vertebral column terminated in a round compressed manner under the skin, which extended about 3 inches beyond it, so as to form the curve uniting the hinder extremities.

A communication was read from Mr. George Clark, of Mahéburg, Mauritius, Corr. Memb., on the Squill of Mauritius (*Squilla styli-fera*). After a detailed account of the external characters of this group, Mr. Clark proceeded to observe as follows:—

“The Squills are mostly nocturnal animals, living in holes; hence it is not surprising that they are little known. It is evident at a glance that the position of their branchial apparatus renders it impossible for them to carry their eggs as Lobsters and Shrimps do; such an arrangement would stop their breathing. Cuvier states that he never saw one bearing eggs; and it was with no small satisfaction that, while making researches on the history and habits of these creatures, I learnt from Dr. Power he had seen this; and a few days after I had the satisfaction of witnessing it myself. The roe of the Squill is very curious, and occupies the whole length of the body. The eggs when first extruded form a compact mass, which the female holds between the three pairs of jaw-feet. As this mass expands it forms a loose kind of tissue, somewhat similar to a fleece of wool. Little by little, as the eggs enlarge, the texture of the mass becomes looser, until the larvæ are hatched and swim off to shift for themselves. In the first period of incubation, if I may so call it, the female will hold her eggs even when caught; but the further advanced they are the more readily does she drop them, possibly on account of their cohering less firmly. I believe the female must fast while carrying her eggs; for I have found the stomachs of those taken at that period quite empty, but generally full at other times. When first hatched the larvæ are of a delicate yellowish green, and are very active. As they grow they assume a mottled grey, and the swimmerets and legs become pea-green. The green gradually increases in brightness; but it is not till they have reached a length of three inches that the colours of the adult appear. The male is then of a beautiful bluish green, with the jaw-feet, the swimmerets, and the branchiæ, as well as the antennæ and the firmbræ which border the different organs, of a cherry-red. The female is clouded with brown and grey, presenting much the appearance of tortoiseshell, and the red about her is much less vivid than in the male. The young Squills inhabit holes in the sand, near low-water mark. The old ones are never found here, but reside in the patches of coral which are scattered over the shallows. Both old and young have invariably two entrances to their holes; and the adults always stop these with a plug of fine seaweed. They do not swim swiftly; and in places where the water is not deep enough for them to swim their principal organs of progression are their large jaw-feet, which they thrust forward as a man would do striving to get along on the points of his elbows. I believe these limbs also serve them to make their holes, as they are often considerably worn on the joints. The motions of the Squill are very different from those of a Shrimp or a Lobster, being much more like those of a caterpillar; hence the little Creoles call the young ones ‘Chenilles de mer.’ The extensor muscles seem to act much more powerfully than the flexors; and it is by the former that the vigorous motion is produced which inflicts

such terrible wounds with the tail. I have seen one literally split the end of a person's finger, and another wound the hand through a thick leather glove. I believe the Squills to be, as Cuvier supposed, carnivorous. I have carefully examined the stomachs of some, and have always found them to contain the remains of small crustaceans, but no vegetable matter. Their flesh is excellent; but the great strength of their integument renders it difficult to detach it. The most extraordinary circumstance in the distribution of the branches of the heart is that it has no apparent connexion with the antennæ or the eyes.

"This beautiful creature would be a great ornament to an aquarium; but, unfortunately, I have never been able to keep an adult specimen alive more than a few hours after it was caught, though using every precaution—placing it in a vessel as soon as it was taken from the sea, and renewing the water at short intervals. When young I have preserved them for days, and might, perhaps, have preserved them indefinitely had I persevered in the attempt. I have known them exist in full vitality for twelve or fifteen hours without water."

Mr. George Dawson Rowley, F.Z.S., exhibited, and read the following remarks upon, a specimen of a rare Asiatic Thrush (*Turdus atrogularis*, Temminck) recently killed in this country, this being its first recorded appearance in the British islands:—

"The specimen of *Turdus atrogularis* was shot near Lewes, Sussex, on December 23rd, 1868. It is a young male, as shown by its plumage; dissection also confirmed the fact. I saw the bird in the flesh, and took particular care to ascertain its history, because it belongs to the fauna of Central Asia, and is only an accidental visitor to Europe. To find such a species on the south coast of England appears to me a matter of considerable interest. It is now in the collection of T. J. Monk, Esq., of Mountfield House, near Lewes, who purchased it for a trifle of a working-man."

The following papers were read:—

1. On the Value of the Characters of the Base of the Cranium in the Classification of the Order Carnivora, and on the Systematic Position of *Bassaris* and other disputed Forms. By WILLIAM HENRY FLOWER, F.R.S., F.Z.S., &c., Conservator of the Museum of the Royal College of Surgeons.

The Order Carnivora has always been an attractive one to zoologists; and consequently nearly all the important structural modifications which occur among its members are so well known that it is surprising that there is not yet a more universal accord of opinion upon their arrangement and mutual affinities.